

1. A firefighting apparatus capable of temporary installation and adapted for use in a host aircraft comprising a fuselage defining an interior and an exterior, said firefighting apparatus comprising a retardant tank disposed in the interior of the host aircraft, and an ejection tube in fluid communication with said retardant tank, and a door plug for mounting within a fuselage orifice in the host aircraft, said door plug providing for fluid communication of retardant from said retardant tank through said ejection tube to the exterior of the host aircraft.
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2. The firefighting apparatus of Claim 1, wherein said door plug comprises a pressurizable seal around said ejection tube assembly.
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3. The firefighting apparatus of Claim 1, wherein said door plug comprises at least two segments.
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4. The firefighting apparatus of Claim 1, wherein said door plug can be temporarily installed permitting the interior of the host aircraft to be pressurized.
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5. The apparatus of Claim 1, wherein said firefighting apparatus is mounted on a pallet.
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6. The apparatus of Claim 5, wherein said pallet is adapted for roll on capability to the interior of the host aircraft.
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7. The apparatus of Claim 1, wherein a portion of said ejection tube is disposed exterior to the host aircraft and is adapted to be oriented in a rearward and downward orientation with respect to the host aircraft.
8. The apparatus of Claim 1, wherein said retardant tank can be pressurized.
9. The apparatus of Claim 1, further comprising a compressor connected to said retardant tank to effect pressurization of said retardant tank.
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10. The apparatus of Claim 9, further comprising a compressed air storage reservoir disposed intermediate said compressor and said retardant tank.
- 5 11. The apparatus of Claim 1, further comprising a foam and chemical additive tank connected for controlled input of foam and chemical additives to said retardant tank.
- 10 12. The apparatus of Claim 1, further comprising at least one sensor operably connected to said firefighting apparatus to effect user-discriminable data for effecting retardant delivery.
- 15 13. The apparatus of Claim 1, further comprising line of sight and over the horizon communications and data transmission capability.
- 15 14. The apparatus of Claim 13, wherein one of said sensors is a transceiver, said transceiver being a GPS positioning assembly.
- 20 15. The apparatus of Claim 1, wherein the host aircraft is a fixed or rotary wing aircraft with at least one oversized cargo door capable of accommodating the transit of a 463L or like cargo mounting pallet.
- 25 16. The apparatus of Claim 1, wherein said door plug comprises a mounting collar for said ejection tube for providing fluid communication through said door plug from the interior to the exterior of the host aircraft.
17. The apparatus of Claim 1, wherein said door plug incorporates an observation window and a horizontally disposed GPS blade antenna.
- 30 18. The apparatus of Claim 1, wherein said retardant tank comprises a high-pressure air expansion horn and diffuser.
19. The apparatus of Claim 1, wherein said retardant tank comprises a fluids collection sump to facilitate complete ejection of all fluids.
- 35 20. The apparatus of Claim 1 wherein said retardant tank comprises a retractable, fill/overfill pipe discharge assembly which can translate from

the interior to the exterior of the host aircraft during fluid transfer operations.

21. The apparatus of Claim 10 wherein said compressed air storage reservoir comprises a plurality of high pressure overfill rupture discs.
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22. The apparatus of Claim 19 wherein said fluids collection sump of said retardant tank is attached to said fluid ejection tube.
- 10 23. The apparatus of Claim 1 wherein said fluid ejection tube comprises a fill/overfill pipe discharge port external to the host aircraft.
24. The apparatus of Claim 23 wherein said ejection tube comprises a fill indicator panel with intercom connection external to the host aircraft.
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25. The apparatus of Claim 1 wherein said ejection tube comprises a pintle nozzle, said pintle nozzle being capable of variable flow and constant flow rate.
- 20 26. The apparatus of Claim 1 wherein said ejection tube comprises a foam and chemical additive injection module.
27. The apparatus of Claim 26 wherein said foam and chemical injection module is connected to a foam and chemical additive tank.
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28. The apparatus of Claim 1, further comprising an electro-optical and radar sensor fire targeting and assessment assembly attached to an externally-disposed section of said ejection tube.
- 30 29. The apparatus of Claim 1, further comprising an externally mounted, fully articulated electro-optical and radar sensor gimbal turret fire targeting and assessment assembly attached to an externally-disposed section of said ejection tube.
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30. The apparatus of Claim 1, further comprising a fuselage upper ditching hatch capable of temporary installation and which comprises an antenna selected from the group consisting of: a line of sight communications antenna, an over the horizon satellite communications and data

transmission antenna, and a global positioning satellite system antenna connected to a transceiver/processor LRU.

31. The apparatus of Claim 1, further comprising a control interface assembly.
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32. The apparatus of Claim 31, wherein said control interface assembly is affixed to an operator chair mounted to a pallet assembly.
33. The apparatus of Claim 31, wherein said control interface assembly is adapted for temporarily installation within the cockpit of the host aircraft.
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34. The apparatus of Claim 31, wherein said control interface assembly comprises a handheld joystick with selectable discharge trigger to effect user definable release of firefighting retardant.
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35. The apparatus of Claim 31, wherein said control interface assembly incorporates a plurality of seats adapted for crew seating.
36. A firefighting apparatus adapted for use in a host aircraft comprising a fuselage defining an interior and an exterior, said firefighting apparatus comprising a pressurizable retardant tank disposed in the interior of the host aircraft, the retardant tank being capable of roll-on and roll-off installation, an ejection tube in fluid communication with said retardant tank, a door plug for mounting within a fuselage orifice in the host aircraft, said door plug providing for fluid communication of retardant from said retardant tank through said ejection tube to the exterior of the host aircraft, and at least one sensor operably connected to said firefighting apparatus to effect user-discriminable data for effecting retardant delivery.
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37. The firefighting apparatus of Claim 36, wherein said sensor is chosen from the group consisting of fixed or steerable gimbal based infrared/electro optical sensor, hyperspectral, ballistic winds LIDAR, and, day/night video camera/spotting scope, inertial navigation and GPS unit, electro-optical or radar sensor systems, upper ditching hatch plugs, GPS antenna, SATCOM antenna, and VHF/UHF line-of-sight antenna.
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